

AMENDMENTS TO THE CLAIMS

1. **(Original)** A method for adding a participant to a conference call, said method comprising:

in response to a multipoint controller receiving a request to extend an invitation to an ongoing conference call to a first terminal:

establishing a Call Optimization Application (COA) channel between a Multipoint Controller-Call Optimization Application (MC-COA) and a Call Optimization Application co-resident with the first terminal (Terminal-COA), said establishing a COA channel effected via instant messaging following an address resolution; exchanging cost information data between the Terminal-COA and the MC-COA;

determining an optimal media transport channel origination strategy in response to the cost information data;

sending the Terminal-COA an invitation to join the conference call, said invitation having associated information consonant with the optimal media transport channel origination strategy;

receiving, with the MC-COA, a message from the Terminal-COA containing human user input received in response to the invitation to join; and

responding to the message containing the human user input.

2. **(Original)** The method of Claim 1, wherein said establishing a Call Optimization Application (COA) channel further includes:

obtaining a connection address of the terminal to be added; and

associating the connection address with a non-media-transport-channel-supporting connection address, wherein the non-media-transport-channel-supporting connection address includes an instant messaging service identifier.

3. **(Original)** The method of Claim 1, wherein said establishing a Call Optimization Application (COA) channel further includes:

establishing an instant messaging connection.

4. **(Original)** The method of Claim 1, wherein said exchanging cost information data between the Terminal-COA and the MC-COA further includes:

gathering, with the Terminal-COA, cost information related to the first terminal originating the media transport channel.

5. **(Original)** The method of Claim 1, wherein said exchanging cost information data between the Terminal-COA and the MC-COA further includes:

gathering, with the MC-COA, cost information related to the multipoint controller originating the media transport channel.

6. **(Original)** The method of Claim 1, wherein said exchanging cost information data between the Terminal-COA and the MC-COA further includes:

sending, over the COA channel, cost information related to the first terminal originating the media transport channel.

7. **(Original)** The method of Claim 1, wherein said determining an optimal media transport channel origination strategy in response to the cost information data further includes:

the multipoint controller comparing cost information.

8. **(Original)** The method of Claim 1, wherein said sending the Terminal-COA an invitation to join the conference call, said invitation having associated information consonant with the optimal media transport channel origination strategy further includes:

sending a request that the first terminal originate a media transport channel with the multipoint controller, if it has been determined to be most cost effective for the first terminal to originate the media transport channel.

9. **(Original)** The method of Claim 1, wherein said sending the Terminal-COA an invitation to join the conference call, said invitation having associated information consonant with the optimal media transport channel origination strategy further includes:

sending a request that the first terminal originate a media transport channel with the multipoint controller, unless specific instructions not to send the request have been received.

10. **(Original)** The method of Claim 1, wherein said sending the Terminal-COA an invitation to join the conference call, said invitation having associated information consonant with the optimal media transport channel origination strategy further includes:
sending a token having at least one field selected from the group comprising a token ID field, a conference ID field, a network address field, a password field, a call initiator field, and an other conference call participants' names field.

11. **(Original)** The method of Claim 1, wherein said receiving, with the MC-COA, a message from the Terminal-COA containing human user input received in response to the invitation to join further includes:
receiving a message that the human user has rejected the invitation.

12. **(Original)** The method of Claim 1, wherein said responding to the message containing the human user input further includes:
sending a message from the MC-COA to the multipoint controller informing the multipoint controller that the invitation to join the conference call has been rejected.

13. **(Original)** The method of Claim 1, wherein said receiving, with the MC-COA, a message from the Terminal-COA containing human user input received in response to the invitation to join further includes:
receiving a message that the human user has accepted the invitation to join but has declined a request to initiate a media transport channel.

14. **(Original)** The method of Claim 13, wherein said responding to the message containing the human user input further includes:

sending a message from the MC-COA to the multipoint controller informing the multipoint controller that the multipoint controller is to originate a media transport channel with the first terminal, in response to the message that the human user has accepted the invitation to join but has declined a request to initiate a media transport channel.

15. **(Original)** The method of Claim 1, wherein said receiving, with the MC-COA, a message from the Terminal-COA containing human user input received in response to the invitation to join further includes:

receiving a message that the human user has accepted the invitation to join and has accepted a request to initiate a media transport channel.

16. **(Original)** The method of Claim 15, wherein said responding to the message containing the human user input further includes:

sending a message from the MC-COA to the multipoint controller informing the multipoint controller that the first terminal will be calling in “as if” first terminal were joining a “meet-me” conference call, in response to the message that the human user has accepted the request to initiate the media transport channel.

17. **(Original)** The method of Claim 15, wherein said responding to the message containing the human user input further includes:

sending a message from the MC-COA to the multipoint controller informing the multipoint controller that the first terminal will be calling in and authenticating itself with token information, in response to the message that the human user has accepted the request to initiate the media transport channel.

18. **(Original)** The method of Claim 17, wherein the token information is unique to the first terminal and provides a security mechanism such that access to the conference call is controlled.

19. **(Original)** The method of Claim 15, wherein said responding to the message containing the human user input further includes:

 sending a message from the MC-COA to the multipoint controller informing the multipoint controller that the first terminal will be calling in and authenticating itself with token information, and that the first terminal desires to bill the call against another entity, in response to the message that the human user has accepted the request to initiate the media transport channel.

20. **(Previously Presented)** A system comprising:

 means, responsive to a multipoint controller receiving a request to extend an invitation to an ongoing conference call to a first terminal, for establishing a Call Optimization Application (COA) channel between a Multipoint Controller-Call Optimization Application (MC-COA) and a Call Optimization Application co-resident with the first terminal (Terminal-COA), said means for establishing a COA channel effected via instant messaging following an address resolution;

 means for exchanging cost information data between the Terminal-COA and the MC-COA;

 means for determining an optimal media transport channel origination strategy in response to the cost information data;

 means for sending the Terminal-COA an invitation to join the conference call, said invitation having associated information consonant with the optimal media transport channel origination strategy;

 means for receiving, with the MC-COA, a message from the Terminal-COA containing human user input received in response to the invitation to join;

 and

 responding to the message containing the human user input.

21. **(Original)** The system of Claim 20, further comprising:

 a network server computer having the system; and

said network server computer including at least one processor and at least one memory.

22. **(Original)** The system of Claim 20, wherein said means for establishing a Call Optimization Application (COA) channel further includes:

means for obtaining a connection address of the terminal to be added; and
means for associating the connection address with a non-media-transport-channel-supporting connection address, wherein the non-media-transport-channel-supporting connection address includes an instant messaging service identifier.

23. **(Original)** The system of Claim 20, wherein said means for establishing a Call Optimization Application (COA) channel further includes:

means for establishing an instant messaging connection.

24. **(Original)** The system of Claim 20, wherein said means for exchanging cost information data between the Terminal-COA and the MC-COA further includes:

means for gathering, with the Terminal-COA, cost information related to the first terminal originating the media transport channel.

25. **(Original)** The system of Claim 20, wherein said means for exchanging cost information data between the Terminal-COA and the MC-COA further includes:

means for gathering, with the MC-COA, cost information related to the multipoint controller originating the media transport channel.

26. **(Original)** The system of Claim 20, wherein said means for exchanging cost information data between the Terminal-COA and the MC-COA further includes:

means for sending, over the COA channel, cost information related to the first terminal originating the media transport channel.

27. **(Original)** The system of Claim 20, wherein said means for determining an optimal media transport channel origination strategy in response to the cost information data further includes:

means for the multipoint controller to compare cost information.

28. **(Original)** The system of Claim 20, wherein said means for sending the Terminal-COA an invitation to join the conference call, said invitation having associated information consonant with the optimal media transport channel origination strategy further includes:

means for sending a request that the first terminal originate a media transport channel with the multipoint controller, if it has been determined to be most cost effective for the first terminal to originate the media transport channel.

29. **(Original)** The system of Claim 20, wherein said means for sending the Terminal-COA an invitation to join the conference call, said invitation having associated information consonant with the optimal media transport channel origination strategy further includes:

means for sending a request that the first terminal originate a media transport channel with the multipoint controller, unless specific instructions not to send the request have been received.

30. **(Original)** The system of Claim 20, wherein said means for sending the Terminal-COA an invitation to join the conference call, said invitation having associated information consonant with the optimal media transport channel origination strategy further includes:

means for sending a token having at least one field selected from the group comprising a token ID field, a conference ID field, a network address field, a password field, a call initiator field, and an other conference call participants' names field.

31. **(Original)** The system of Claim 20, wherein said means for receiving, with the MC-COA, a message from the Terminal-COA containing human user input received in response to the invitation to join further includes:

means for receiving a message that the human user has rejected the invitation.

32. **(Original)** The system of Claim 20, wherein said means for responding to the message containing the human user input further includes:

means for sending a message from the MC-COA to the multipoint controller informing the multipoint controller that the invitation to join the conference call has been rejected.

33. **(Original)** The system of Claim 20, wherein said means for receiving, with the MC-COA, a message from the Terminal-COA containing human user input received in response to the invitation to join further includes:

means for receiving a message that the human user has accepted the invitation to join but has declined a request to initiate a media transport channel.

34. **(Original)** The system of Claim 33, wherein said means for responding to the message containing the human user input further includes:

means for sending a message from the MC-COA to the multipoint controller informing the multipoint controller that the multipoint controller is to originate a media transport channel with the first terminal, in response to the message that the human user has accepted the invitation to join but has declined a request to initiate a media transport channel.

35. **(Original)** The system of Claim 20, wherein said means for receiving, with the MC-COA, a message from the Terminal-COA containing human user input received in response to the invitation to join further includes:

means for receiving a message that the human user has accepted the invitation to join and has accepted a request to initiate a media transport channel.

36. **(Original)** The system of Claim 35, wherein said means for responding to the message containing the human user input further includes:

means for sending a message from the MC-COA to the multipoint controller
informing the multipoint controller that the first terminal will be calling in
“as if” first terminal were joining a “meet-me” conference call, in response
to the message that the human user has accepted the request to initiate the
media transport channel.

37. **(Original)** The system of Claim 35, wherein said means for responding to the message containing the human user input further includes:

means for sending a message from the MC-COA to the multipoint controller
informing the multipoint controller that the first terminal will be calling in
and authenticating itself with token information, in response to the
message that the human user has accepted the request to initiate the media
transport channel.

38. **(Original)** The system of Claim 37, wherein the token information is unique to the first terminal and provides a security mechanism such that access to the conference call is controlled.

39. **(Original)** The system of Claim 35, wherein said means for responding to the message containing the human user input further includes:

means for sending a message from the MC-COA to the multipoint controller
informing the multipoint controller that the first terminal will be calling in
and authenticating itself with token information, and that the first terminal
desires to bill the call against another entity, in response to the message
that the human user has accepted the request to initiate the media transport
channel.

40. **(Original)** A method for adding a participant to a conference call, said method comprising:

in response to a multipoint controller receiving a request to extend an invitation to an ongoing conference call to a first terminal, attempting to establish, via instant messaging services, a Call Optimization Application (COA) channel between a Multipoint Controller-Call Optimization Application (MC-COA) and a Call Optimization Application co-resident with the first terminal (Terminal-COA).

41. **(Original)** The method of Claim 40, wherein said attempting to establish, via instant messaging services, a Call Optimization Application (COA) channel further comprises:

determining that the COA channel cannot be established; and
informing the multipoint controller that Call Optimization is unavailable, whereby substantially backwards compatibility with existing communications systems is achieved.

42. **(Previously Presented)** A system comprising:

means for detecting reception of a request to extend an invitation to an ongoing conference call to a first terminal; and

means for attempting to establish, via instant messaging services, a Call Optimization Application (COA) channel between a Multipoint Controller-Call Optimization Application (MC-COA) and a Call Optimization Application co-resident with the first terminal (Terminal-COA).

43. **(Original)** The system of Claim 42, further comprising:

a network server computer having the system; and
said network server computer including at least one processor and at least one memory.

44. **(Original)** The system of Claim 42, wherein said means for attempting to establish, via instant messaging services, a Call Optimization Application (COA) channel further comprises:

means for determining that the COA channel cannot be established; and
means for informing the multipoint controller that Call Optimization is
unavailable, whereby substantially backwards compatibility with existing
communications systems is achieved.

45. **(Original)** A method for accepting an invitation to an ongoing conference call, said method comprising:

receiving, with a Call Optimization Application co-resident with a first terminal (Terminal-COA), an invitation to the first terminal to join an ongoing conference call over a Call Optimization Application (COA) channel established via instant messaging services; and
responding to the invitation to join in response to human user input to an interface activated in response to the invitation.

46. **(Original)** The method of Claim 45, wherein said receiving, with a Call Optimization Application co-resident with a first terminal (Terminal-COA), an invitation to the first terminal to join an ongoing conference call over a Call Optimization Application (COA) channel established via instant messaging services further includes:

receiving a token having at least one field selected from the group comprising a token ID field, a conference ID field, a network address field, a password field, a call initiator field, and an other conference call participants' names field.

47. **(Original)** The method of Claim 45, wherein said receiving, with a Call Optimization Application co-resident with a first terminal (Terminal-COA), an invitation to the first terminal to join an ongoing conference call over a Call Optimization Application (COA) channel established via instant messaging services further includes:

gathering cost information related to the first terminal originating a media transport channel with a multipoint controller; and
sending a message containing the cost information from the Terminal-COA to a Multipoint-Controller Call Optimization Application (MC-COA) over the COA channel.

48. **(Original)** The method of Claim 45, wherein said responding to the invitation to join in response to human user input to an interface activated in response to the invitation further includes:

 sending a message containing the human user input from the Terminal-COA to a Multipoint-Controller Call Optimization Application (MC-COA) over the COA channel.

49. **(Original)** The method of Claim 45, wherein said responding to the invitation to join in response to human user input to an interface activated in response to the invitation further includes:

 activating an interface which presents at least one invitation option selected from the group comprising accepting or rejecting an invitation to join an ongoing conference call, accepting the invitation to join the ongoing conference call but rejecting an invitation to originate a media transport channel, and accepting the invitation to join the ongoing conference call and accepting the invitation to originate the media transport channel.

50. **(Original)** The method of Claim 45, wherein said responding to the invitation to join in response to human user input to an interface activated in response to the invitation further includes:

 sending a message indicative of the human user input from the Terminal-COA to a Multipoint Controller-Call Optimization Application (MC-COA) over the COA channel.

51. **(Original)** The method of Claim 45, wherein said responding to the invitation to join in response to human user input to an interface activated in response to the invitation further includes:

 causing, with the Terminal-COA, the first terminal to originate a media transport channel with a multipoint controller and authenticate itself as if it were a “meet-me” conference call, in response to user input indicating that an invitation to join an ongoing conference call has been accepted and that a

request that the first terminal originate the media transport channel has been accepted.

52. **(Original)** The method of Claim 51, further comprising:
the first terminal authenticating itself by presenting token information, received
by the Terminal-COA from the MC-COA, to the multipoint controller.

53. **(Original)** A system comprising:
means for receiving, with a Call Optimization Application co-resident
with a first terminal (Terminal-COA), an invitation to the first
terminal to join an ongoing conference call over a Call
Optimization Application (COA) channel established via instant
messaging services; and
means for responding to the invitation to join in response to human user
input to an interface activated in response to the invitation.

54. **(Original)** The system of Claim 53, further comprising:
a workstation computer having the system; and
said workstation computer having at least one processor and at least one memory.

55. **(Original)** The system of Claim 53, wherein said means for receiving, with a
Call Optimization Application co-resident with a first terminal (Terminal-COA), an
invitation to the first terminal to join an ongoing conference call over a Call Optimization
Application (COA) channel established via instant messaging services further includes:
means for receiving a token having at least one field selected from the group
comprising a token ID field, a conference ID field, a network address
field, a password field, a call initiator field, and an other conference call
participants' names field.

56. **(Original)** The system of Claim 53, wherein said means for receiving, with a
Call Optimization Application co-resident with a first terminal (Terminal-COA), an

invitation to the first terminal to join an ongoing conference call over a Call Optimization Application (COA) channel established via instant messaging services further includes:

- means for gathering cost information related to the first terminal originating a media transport channel with a multipoint controller; and
- means for sending a message containing the cost information from the Terminal-COA to a Multipoint-Controller Call Optimization Application (MC-COA) over the COA channel.

57. **(Original)** The system of Claim 53, wherein said means for responding to the invitation to join in response to human user input to an interface activated in response to the invitation further includes:

- means for sending a message containing the human user input from the Terminal-COA to a Multipoint-Controller Call Optimization Application (MC-COA) over the COA channel.

58. **(Original)** The system of Claim 53, wherein said means for responding to the invitation to join in response to human user input to an interface activated in response to the invitation further includes:

- means for activating an interface which presents at least one invitation option selected from the group comprising accepting or rejecting an invitation to join an ongoing conference call, accepting the invitation to join the ongoing conference call but rejecting an invitation to originate a media transport channel, and accepting the invitation to join the ongoing conference call and accepting the invitation to originate the media transport channel.

59. **(Original)** The system of Claim 53, wherein said means for responding to the invitation to join in response to human user input to an interface activated in response to the invitation further includes:

- means for sending a message indicative of the human user input from the Terminal-COA to a Multipoint Controller-Call Optimization Application (MC-COA) over the COA channel.

60. **(Original)** The system of Claim 53, wherein said means for responding to the invitation to join in response to human user input to an interface activated in response to the invitation further includes:

means for causing, with the Terminal-COA, the first terminal to originate a media transport channel with a multipoint controller and authenticate itself as if it were a “meet-me” conference call, in response to user input indicating that an invitation to join an ongoing conference call has been accepted and that a request that the first terminal originate the media transport channel has been accepted.

61. **(Original)** The system of Claim 60, further comprising:

means for the first terminal to authenticate itself by presenting token information, received by the Terminal-COA from the MC-COA, to the multipoint controller.

62. **(Previously Presented)** A program product comprising:

signal bearing media bearing program code, responsive to a multipoint controller receiving a request to extend an invitation to an ongoing conference call to a first terminal, for:

establishing a Call Optimization Application (COA) channel between a Multipoint Controller-Call Optimization Application (MC-COA) and a Call Optimization Application co-resident with the first terminal (Terminal-COA) following an address resolution), said establishing a COA channel effected via instant messaging; exchanging cost information data between the Terminal-COA and the MC-COA;

determining an optimal media transport channel origination strategy in response to the cost information data;

sending the Terminal-COA an invitation to join the conference call, said invitation having associated information consonant with the optimal media transport channel origination strategy;

receiving, with the MC-COA, a message from the Terminal-COA
containing human user input received in response to the invitation
to join; and
responding to the message containing the human user input.

63. **(Original)** The program product of Claim 62, wherein said signal bearing media further includes recordable media.

64. **(Original)** The program product of Claim 62, wherein said signal bearing media further includes transmission media.

65. **(Previously Presented)** A program product comprising:
signal bearing media bearing program code, responsive to a multipoint controller receiving a request to extend an invitation to an ongoing conference call to a first terminal, for attempting to establish, via instant messaging services, a Call Optimization Application (COA) channel between a Multipoint Controller-Call Optimization Application (MC-COA) and a Call Optimization Application co-resident with the first terminal (Terminal-COA)).

66. **(Original)** The program product of Claim 65, wherein said signal bearing media is selected from the group comprising recordable media and transmission media.

67. **(Previously Presented)** A program product comprising:
signal bearing media bearing
program code for receiving, with a Call Optimization Application co-resident with a first terminal (Terminal-COA), an invitation to the first terminal to join an ongoing conference call over a Call Optimization Application (COA) channel) established via instant messaging services; and
program code for responding to the invitation to join in response to human user input to an interface activated in response to the invitation.

68. **(Original)** The program product of Claim 67, wherein said signal bearing media further includes:

said signal bearing media selected from the group comprising recordable media and transmission media.

69. **(Previously Presented)** The method of claim 10, wherein said network address field of said token comprises an instant messaging services username.

70. **(Previously Presented)** The system of claim 30, wherein said network address field of said token comprises an instant messaging services username.

71. **(Previously Presented)** The method of claim 46, wherein said network address field of said token comprises an instant messaging services username,
the instant messaging services username identifies a computer, and
a multipoint controller resides on the computer.

72. **(Previously Presented)** The system of claim 55, wherein said network address field of said token comprises an instant messaging services username,
the instant messaging services username identifies a computer, and
a multipoint controller resides on the computer.

73. **(Previously Presented)** A system comprising:
a call manager, wherein
the call manager is configured to detect a request to add a terminal entity to an ongoing conference call, and
a multipoint controller call optimization application (MC-COA) coupled to the call manager, wherein

the MC-COA is configured to initiate a call optimization channel (COA) to the terminal entity via instant messaging services, in response to detection of the request.

74. **(Previously Presented)** The system of claim 73, wherein the MC-COA is configured to:

establish, via the instant messaging services, the COA channel between the MC-COA and a Call Optimization Application co-resident with the terminal entity following an address resolution;
exchange cost information data with the terminal entity;
determine an optimal media transport channel origination strategy in response to the cost information data;
send the terminal entity an invitation to join the conference call, the invitation having associated information consonant with the optimal media transport channel origination strategy;
receive a message from the terminal entity containing human user input received in response to the invitation to join; and
respond to the message containing the human user input.

75. **(Previously Presented)** The system of Claim 74, wherein the MC-COA is configured to:

obtain a connection address of the terminal entity to be added to the ongoing conference call,
associate the connection address with a non-media-transport-channel-supporting connection address.

76. **(Previously Presented)** The system of Claim 74, wherein the MC-COA is configured to:

gather cost information related to the first terminal originating a media transport channel,
gather cost information related to the multipoint controller originating the media transport channel, and

send a request that the terminal entity originate the media transport channel, if it has been determined to be most cost effective for the terminal entity to originate the media transport channel.

77. **(Previously Presented)** The system of Claim 74, wherein the MC-COA is configured to send the terminal entity a token having at least one field selected from the group comprising a token ID field, a conference ID field, a network address field, a password field, a call initiator field, and an other conference call participants' names field.

78. **(Previously Presented)** The system of claim 77, wherein the network address field of the token comprises an instant messaging services username.

79. **(Previously Presented)** The system of Claim 77, wherein the message from the terminal entity comprises information indicating that the human user has accepted the invitation to join and has accepted a request to initiate a media transport channel.

80. **(Previously Presented)** The system of Claim 79, wherein the MC-COA is configured to send a message to a multipoint controller, the message informing the multipoint controller that the terminal entity will be calling in "as if" first terminal were joining a "meet me" conference call.

81. **(Previously Presented)** The system of Claim 79, wherein the MC-COA is configured to send a message to a multipoint controller, the message informing the multipoint controller that the terminal entity will be calling in and authenticating itself with token information, wherein the token information is unique to the terminal entity and provides a security mechanism such that access to the ongoing conference call is controlled.

82. **(Previously Presented)** A system comprising:

a terminal entity, wherein

the terminal entity is configured to receive, via a Call Optimization Application (COA) channel established via instant messaging services, an invitation for the terminal entity to join an ongoing conference call; and

a Call Optimization Application co-resident with the terminal entity, wherein

the Call Optimization Application is configured to respond to the invitation to join, in response to human user input to an interface activated in response to the invitation.

83. **(Previously Presented)** The system of Claim 82, wherein

the terminal entity is configured to receive a token having at least one field

selected from the group comprising a token ID field, a conference ID field, a network address field, a password field, a call initiator field, and an other conference call participants' names field.

84. **(Previously Presented)** The system of claim 83, wherein

the network address field of the token comprises an instant messaging services username.

85. **(Previously Presented)** The system of Claim 82, wherein

the Call Optimization Application is configured to gather cost information related to the terminal entity originating a media transport channel with a multipoint controller; and

the terminal entity is configured to send a message containing the cost information to a Multipoint-Controller Call Optimization Application (MC-COA) over the COA channel.

86. **(Previously Presented)** The system of Claim 85, wherein

the terminal entity is configured to send a message containing the human user input to the Multipoint-Controller Call Optimization Application (MC-COA) over the COA channel.

87. **(Previously Presented)** The system of Claim 86, wherein the Call Optimization Application is configured to cause the terminal entity to originate a media transport channel with the multipoint controller and authenticate the terminal entity as if the ongoing conference call were a “meet-me” conference call, in response to user input indicating that an invitation to join the ongoing conference call has been accepted and that a request that the terminal entity originate the media transport channel has been accepted.

88. **(Previously Presented)** The system of Claim 87, wherein the terminal entity is configured to authenticate itself by presenting token information, received from the MC-COA, to the multipoint controller.